# AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

1      1.     (Currently amended) A method for implementing a sleep proxy,
2   comprising:
3      receiving a request at the sleep proxy for information pertaining to a
4   service provided by a device;
5      determining if the device is a ~~member of a list of devices~~<u>device</u> for which
6   the sleep proxy answers;
7      if so, determining if the request is a request for which the sleep proxy can
8   answer; and
9      if so, sending a response to the request on behalf of the device.

1      2.     (Original) The method of claim 1, wherein if the request is not a
2   request for which the sleep proxy can answer, the method further comprises
3   sending a wakeup packet to the device, wherein the wakeup packet is a packet that
4   causes the device to exit a power-saving mode.

1      3.     (Original) The method of claim 1, wherein prior to receiving the
2   request, the method further comprises:
3      receiving a registration request from the device, wherein the registration
4   request contains:
5          sufficient information to allow the sleep proxy to generate a
6          wakeup packet that can wake up the device, and

7     a list of requests for which the sleep proxy can answer; and

8    adding the device to the list of devices for which the sleep proxy answers.


1   4.  (Original) The method of claim 3, wherein the registration

2 additionally contains a lease expiration time, wherein upon reaching the lease

3 expiration time, the sleep proxy cancels the device registration.


1   5.  (Original) The method of claim 4, wherein an internal timer in the

2 device wakes up the device so that the device can renew its registration with the

3 sleep proxy before the registration expires.


1   6.  (Original) The method of claim 1, further comprising:

2    receiving a notification from the device that the device is entering a

3 power-saving state; and

4    in response to the notification, configuring the sleep proxy to answer for

5 the device.


1   7.  (Original) The method of claim 1, further comprising:

2    receiving a notification from the device that the device has exited a power-

3 saving state; and

4    in response to the notification, configuring the sleep proxy not to answer

5 for the device.


1   8.  (Original) The method of claim 1, further comprising

2 implementing a second sleep proxy that duplicates the functionality of the sleep

3 proxy for fault-tolerance purposes.

1  9.  (Original) The method of claim 1, wherein sending a response to

2  the request further comprises waiting a random period of time prior to sending the

3  response, wherein waiting the random period of time facilitates duplicate answer

4  suppression between sleep proxies.


1  10.  (Currently amended) A computer-readable storage medium storing

2  instructions that when executed by a computer cause the computer to perform a

3  method for implementing a sleep proxy, the method comprising:

4      receiving a request at the sleep proxy for information pertaining to a

5  service provided by a device;

6      determining if the device is a ~~member of a list of devices~~ device for which

7  the sleep proxy answers;

8      if so, determining if the request is a request for which the sleep proxy can

9  answer; and

10     if so, sending a response to the request on behalf of the device.


1  11.  (Original) The computer-readable storage medium of claim 10,

2  wherein if the request is not a request for which the sleep proxy can answer, the

3  method further comprises sending a wakeup packet to the device, wherein the

4  wakeup packet is a packet that causes the device to exit a power-saving mode.


1  12.  (Original) The computer-readable storage medium of claim 10,

2  wherein prior to receiving the request, the method further comprises:

3      receiving a registration request from the device, wherein the registration

4  request contains:

5          sufficient information to allow the sleep proxy to generate a

6          wakeup packet that can wake up the device, and

7          a list of requests for which the sleep proxy can answer; and

4

8        adding the device to the list of devices for which the sleep proxy answers.

1       13.    (Original) The computer-readable storage medium of claim 12,

2  wherein the registration additionally contains a lease expiration time, wherein

3  upon reaching the lease expiration time, the sleep proxy cancels the device

4  registration.

1       14.    (Original) The computer-readable storage medium of claim 13,

2  wherein an internal timer in the device wakes up the device so that the device can

3  renew its registration with the sleep proxy before the registration expires.

1       15.    (Original) The computer-readable storage medium of claim 10,

2  wherein the method further comprises:

3       receiving a notification from the device that the device is entering a

4  power-saving state; and

5       in response to the notification, configuring the sleep proxy to answer for

6  the device.

1       16.    (Original) The computer-readable storage medium of claim 10,

2  wherein the method further comprises:

3       receiving a notification from the device that the device has exited a power-

4  saving state; and

5       in response to the notification, configuring the sleep proxy not to answer

6  for the device.

1       17.    (Original) The computer-readable storage medium of claim 10,

2  wherein the method further comprises implementing a second sleep proxy that

3  duplicates the functionality of the sleep proxy for fault-tolerance purposes.

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1      18.    (Original) The computer-readable storage medium of claim 10,

2   wherein sending a response to the request further comprises waiting a random

3   period of time prior to sending the response, wherein waiting the random period

4   of time facilitates duplicate answer suppression between sleep proxies.


1      19.    (Currently amended) An apparatus that implements a sleep proxy,

2   comprising:

3          a receiving mechanism configured to receive a request at the sleep proxy

4   for information pertaining to a service provided by a device;

5          a determination mechanism configured to determine if the device is a

6   ~~member of a list of devices~~ device for which the sleep proxy answers;

7          a second determination mechanism configured to determine if the request

8   is a request for which the sleep proxy can answer if the device is a member of the

9   list of devices for which the sleep proxy answers; and

10         a response mechanism configured to send a response to the request on

11  behalf of the device if the request is a request for which the sleep proxy can

12  answer.


1      20.    (Original) The apparatus of claim 19, wherein if the request is not a

2   request for which the sleep proxy can answer, the apparatus further comprises a

3   wakeup mechanism configured to send a wakeup packet to the device that causes

4   the device to exit a power-saving mode.


1      21.    (Original) The apparatus of claim 19, further comprising:

2          a registration mechanism configured to receive a registration request from

3   the device, wherein the registration request contains:

4         sufficient information to allow the sleep proxy to generate a

5         wakeup packet that can wake up the device, and

6              a list of requests for which the sleep proxy can answer; and

7         a list addition mechanism configured to add the device to the list of

8    devices for which the sleep proxy answers.


1    22.    (Original) The apparatus of claim 21, wherein the registration

2    additionally contains a lease expiration time, and wherein the apparatus further

3    comprises a cancellation mechanism that is configured to cancel the device

4    registration upon reaching the lease expiration time.


1    23.    (Original) The apparatus of claim 22, wherein an internal timer in

2    the device wakes up the device so that the device can renew its registration with

3    the sleep proxy before the registration expires.


1    24.    (Original) The apparatus of claim 19, further comprising:

2         a notification mechanism configured to receive a notification from the

3    device that the device is entering a power-saving state; and

4         a configuration mechanism configured to configure the sleep proxy to

5    answer for the device in response to the notification.


1    25.    (Original) The apparatus of claim 19, further comprising:

2         a notification mechanism configured to receive a notification from the

3    device that the device has exited a power-saving state; and

4         a configuration mechanism configured to configure the sleep proxy not to

5    answer for the device in response to the notification.

1        26.     (Original) The apparatus of claim 19, further comprising a second

2    sleep proxy that duplicates the functionality of the sleep proxy for fault-tolerance

3    purposes.


1        27.     (Original) The apparatus of claim 19, wherein the response

2    mechanism is further configured to wait a random period of time prior to sending

3    the response, wherein waiting the random period of time facilitates duplicate

4    answer suppression between sleep proxies.